

REMARKS

Claims 1 - 20 were presented for examination in the present application. The instant amendment adds new claims 21 - 28. Thus, claims 1 – 28 are presented for consideration upon entry of the instant amendment.

Claims 1 – 18 were rejected under 35 U.S.C. 112, second paragraph. Independent claims 1, 13, 14, and 17 have been amended so as to render the rejections moot. In addition, claims 2 through 12 depend from independent claim 1, thus also rendering the rejections to claims 2 through 12 moot. Claims 15 and 16 depend from independent claim 14, thereby rendering the rejections to claims 15 and 16 moot. Claim 18 depends from independent claim 17 thereby also rendering the rejection to claim 18 moot. Reconsideration and withdrawal of the rejections to claims 1 through 18 are respectfully requested.

Claims 1 – 8 and 11 – 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,096,014 (“Haffner”), in combination with WO 99/41310 (“Borealis”). Claims 9 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Haffner, in combination with Borealis, and further in view of U.S. Patent No. 5,008,296 (“Antoon”).

Independent claims 1, 13, and 14 now recite “wherein the composition is made using Ziegler-Natta catalysis (emphasis added)”. Independent claim 17 now recites “wherein the bimodal polyethylene composition has been produced by a process comprising a polymerisation catalyst that is a Ziegler-Natta catalyst. (emphasis added)”.

Haffner discloses a breathable thermoplastic film that comprises a linear low density polyethylene resin including copolymers of ethylene and C₄₋₈ α -olefins monomers and at least 40% filler (column 3, lines 3-8). The main aim of the films in Haffner is that they have cloth-like aesthetics, durability and comfort (column 2, lines 65-

67) but Haffner additionally requires that its films have a minimum water vapour transmission rate (WVTR) of $1500 \text{ g/m}^2/24$ (column 3, lines 9-12 and claim 1).

Haffner specifies in claim 1 the nature of the polyethylene resin to be included in these films. More specifically, Haffner requires that the polyethylene comprise "super-octene resins or metallocene-catalysed ethylene-based copolymers". Column 5, lines 36-37 of Haffner state that these type of polymers are necessary in order to impart stretch and recover properties to the film.

The exact nature of the polyethylene resins included in the films of Haffner is discussed further at column 3, line 61-column 5, line 50. Column 3, line 62-column 4, line 13 describes the "super-octene resins" and it is confirmed therein that this resin is made using an "improved catalyst". Moreover, column 4, lines 5-13 state that this catalyst regulates the molecular weight/molecular weight distribution of the polymer and provide resins having a narrower molecular weight distribution. Column 4, line 49 *et seq* of Haffner go on to describe other ethylene-based polymers that may be used in the present invention including "non-elastic metallocene-catalysed polymers". Metallocene catalysts have a single active site and thus, like the super octene catalyst, provide polymers having a narrow molecular weight distribution.

Applicants respectfully submit that one of ordinary skill in the art reading Haffner is taught that use of a "super octene" resin made using an improved catalyst yielding a narrow molecular weight distribution or a copolymer made from a metallocene catalyst should be used. This is the case whether the polymer is used alone or in a blend. In this latter regard, Applicants refer to column 5, lines 56-58 wherein it is confirmed that other components can only be present insofar as they do not effect the characteristics of the film provided by the metallocene produced or super octene resin.

Haffner therefore teaches that the nature of the copolymer to be used in the production of its breathable films is critical. Column 5, lines 36-37 of Haffner confirm that these polymers impart stretch and recovery to the film. Moreover column 2, lines

10-12 confirm that stretching is the conventional process for making microporous film, and therefore, that stretchability is the key to the provision of breathable films.

The Office Action asserts that it would be obvious to use the polymer of Borealis in the Haffner disclosure. Borealis however does not concern breathable film. Borealis gives no indication whatsoever about the performance of its polymers in the presence of a filler. One of ordinary skill in the art has, for example, no idea whether the resins of Borealis can be mixed with a filler and stretched to obtain a microporous breathable film without pinholes. Furthermore, there is no indication of what its water vapour transmission rate will be or its mechanical properties. For this reason, it is the Applicants' view that one of ordinary skill in the art would not look to Borealis as asserted in the Office Action.

Nevertheless, Applicants also submit that even if one were to look to Borealis, he would not in any case arrive at the invention claimed. As discussed above, Haffner, which concerns breathable films, expressly teaches one of ordinary skill to utilize a copolymer made with a metallocene catalyst or an "improved catalyst" providing a narrow molecular weight distribution. Haffner teaches that this is necessary to impart the stretchability the polymer requires to undergo the stretching to provide breathable film. In contrast, Borealis teaches that its polymers are made using a Ziegler Natta catalyst (page 10, lines 19-20) which tend to provide polymers having a broad molecular weight distribution. Thus to incorporate the polymers described in Borealis into the breathable film of Haffner is to completely go against the teaching of Haffner to use a metallocene produced or super octene polymer. There is simply no way that one of ordinary skill in the art would make this substitution as it is Haffner, not Borealis, which actually discloses the type of film which he seeks to make, i.e. a breathable film. Accordingly, the Applicants submit that the amended claims are patentable over the combination of Haffner and Borealis.

A further point to note is that Haffner specifies at column 5, lines 56-58 that other components may be present only if they do not adversely affect the film properties.

Haffner therefore teaches away from the invention insofar as it suggests that a second polymer component should not be used. If a second component is to be used, it cannot affect the properties of the film. A bimodal material such as that of Borealis inherently comprises two components. The presence of two components undoubtedly affects the properties of the film and Haffner does not envisage whether breathable films can be made with bimodal material. However, Haffner specifically teaches not to use an additional polymer component e.g. one that would be needed to form a bimodal material if it does affect the properties of the films. Haffner explicitly therefore teaches away from the present invention.

The fact that the use of bimodal materials is beneficial is shown from the examples. In particular, the films presently claimed are exemplified with stretch ratios greater than 5. Haffner teaches that films become "splitty" at ratios greater than 5 in column 7, lines 39. It is shown that bimodality allows you to use higher stretch ratios. There is no way the person skilled in the art could have predicted that the use of the films of the invention would allow higher stretch ratios than are taught in Haffner.

Applicants respectfully submit that is purely hindsight reconstruction that allows the Examiner to find the Borealis reference at all. There is nothing in Haffner to indicate a switch of the polymers it describes for the bimodal polymer of Haffner. The claims are patentable.

As such, Applicants respectfully submit that one of ordinary skill in the art would not combine the cited references as asserted in the Office Action to disclose or suggest the elements of independent claims 1, 13, 14, and 17. Therefore, claims 1, 13, 14, and 17 are in condition for allowance. Claims 2 through 12 depend from independent claim 1 and are in condition for allowance for at least the reasons set forth above for claim 1. Claims 15 and 16 depend from independent claim 14 and are in condition for at least the reasons set forth above for claim 14. Claims 18 through 20 depend from independent claim 17 and are in condition for allowance for at least the reasons set

forth above for claim 17. Reconsideration and withdrawal of the rejections to claims 1 through 20 are respectfully requested.

Claims 21 through 28 have been added to point out various aspects of the present application. Support for new claims 21 and 22 can be found in the specification at least in original claim 1. Support for new claims 23 and 24 can be found in the specification at least in original claim 13. Support for new claims 25 and 26 can be found in the specification at least in original claim 14. Support for new claims 27 and 28 can be found in the specification at least in original claim 17.

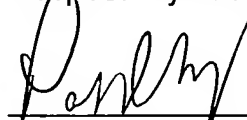
It is believed that new claims 21 through 28 are in condition for allowance. For example, claims 21 and 22 depend from now allowable independent claim 1. Claims 23 and 24 depend from now allowable independent claim 13. Claims 25 and 26 depend from allowable independent claim 14. Claims 27 and 28 depend from now allowable independent claim 17.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Such action is solicited.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below.

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Respectfully submitted,



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